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10/621,175	07/16/2003	Olivier Muhlhoff	P10-1305	4296

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EXAMINER

JULES, FRANTZ F

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,175

Applicant(s)

MUHLHOFF, OLIVIER

Examiner

Frantz F. Jules

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recitation of "profiled rubber mix element extending radially between said annular bead anchoring element and said additional sidewall ring, and located axially to the inside of said axially outermost carcass ply" in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recitation of "a crescent-shaped profiled rubber element posed axially to the inside of said axially inner carcass ply and having a maximum axial thickness at the level of the line of maximum axial width of said tire and further having a minimum axial thickness; at the levels of the edges a crown reinforcement in said tread and of the carcass anchoring element, respectively." in claim 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 13-15 are objected to because of the following informalities:

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In claim 13, line 4, the phrase "at least" should be changed to –the at least– in both occurrences.

In claim 17, line 1, the word "its" should be changed to –the—in front of the word operating.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

An end period is not provided in claim 1, line 15 thereby making the scope of the claim undefined. It is unclear whether the claim continuous elsewhere or not.

Claim 5 includes a period in line 4, which is contrary to the current office practice which require the claims to be of a single sentence.

In claim 10, lines 1-2, the phrase "a crescent-shaped profiled rubber element" is confusing as it is unclear how it relates to previously recited profiled rubber mixed element in claim 1.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 4-6, 8-9, 11, 15, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandezon et al (US 6,554,038) in view of Boileau (US 3,631,913).

Claims 1-2, 4-6, 8-9, 11, 15, 20

Chandezon et al discloses a tire comprising at least a first and a second bead radially extending to at least a first and a second sidewall, respectively, and said sidewalls joined to a tread; said first bead having a seat (42) the generatrix of which has its axially inner end on a circle of diameter greater than the diameter of the circle on which is located the axially outer end, and a carcass reinforcement (1) formed of at least one carcass ply and anchored in said first bead to at least one annular bead anchoring element (2), and when said tire is mounted on its operating rim and inflated to its recommended pressure, the meridian profile of said carcass reinforcement has a tangent to the point of tangency of said meridian profile with said anchoring element of said first bead that forms relative to the axis of rotation an angle open towards the outside at most equal to 70 degrees, and characterized in that said first sidewall further comprises: a profiled rubber mix element extending radially between said annular bead anchoring element and said additional sidewall ring, and located axially to the inside of said axially outermost carcass ply; said ring is located at a distance from the bead which is less than the height of the tire;

wherein said carcass reinforcement ply is anchored in said bead by winding around a bead wire of quasi-circular section to form an upturn extending into a wedge-shaped profiled rubber element having a Shore A hardness greater than 65 points, and wherein

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the cross-section of said wedge-shaped profiled rubber element corresponds to a sector of a circle with an apex A radially beneath said anchoring bead wire, a radially upper side and a radially lower side extending from said apex and joined to a third side opposite said apex A, said radially upper side forming relative to the axis of rotation an angle of between 20 degrees and 70 degrees and said radially lower side forming with the same axis an angle of between 0 and 30 degrees;

wherein said carcass reinforcement comprises at least two carcass plies, and a second axially inner ply is located axially to the inside of said additional sidewall ring and axially to the inside of said profiled element radially extending axially between said anchoring element and said additional ring in accordance with claim 9.

Chandezon et al discloses all of the features as listed above but does not disclose an inextensible additional sidewall ring located axially to the inside of an axially outermost carcass ply. The general concept of providing an inextensible additional sidewall ring located axially to the inside of an axially outermost carcass ply in a tire is well known in the art as illustrated by Boileau which disclose the teaching of an inextensible additional sidewall ring (25) located axially to the inside of an axially outermost carcass ply in a tire, see figs. 2-3. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Chandezon et al to include the use of an inextensible additional sidewall ring located axially to the inside of an axially outermost carcass ply in his advantageous tire as taught by Boileau in order to increase the rigidity of the sidewall of the tire without rendering the tire uncomfortable.

Claim 3

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Regarding using an angle of a line joining the center of ring and the annular bead anchoring element open toward the outside with the axial direction of at most 70 degrees as recited in claim 3, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Chandezon et al to include the use of an angle of a line joining the center of ring and the annular bead anchoring element open toward the outside with the axial direction of at most 70 degrees in his advantageous system, as ring reinforcement location is a common and everyday occurrence throughout the tire design art and the specific use of an angle of a line joining the center of ring and the annular bead anchoring element open toward the outside with the axial direction of at most 70 degrees would have been an obvious matter of design preference depending upon such factors as the load rating of the tire, the yield strength of the side walls material; the targeted vibration characteristics of the tire the ordinarily skilled artisan choosing the best stress profile corresponding to a particular loading imposed on the tire which would most optimize the cost and performance of the device for a particular application at hand, based upon the above noted common design criteria.

8. Claims 12, 16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandezon et al (US 6,554,038) in view of Boileau (US 3,631,913) as applied to claim 1 and further in view of Dewitt (US 4,124,679).

Claims 12, 16, and 19

Chandezon et al teach all the limitations of claims 12, 16, and 19 except for a tire comprising first and second sidewalls with beads of unequal diameters. The general concept of providing first and second sidewalls with beads of unequal diameters in a tire

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is well known in the art as illustrated by DeWitt which discloses the teaching of first and second sidewalls with beads of unequal diameters in a tire assembly, see fig. 1, col. 4, lines 5-10. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Chandezon to incorporate the use of first and second sidewalls with beads of unequal diameters in his advantageous tire as taught by DeWitt in order to improve the spring characteristics of the tire, achieve good lateral lateral stability.

Allowable Subject Matter

9. Claims 7, 10, 13-15, 17-19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Ueyoko et al, Merli et al, Giron, Warchol et al, Tomano et al, Masson et al, Lopez et al and Masclaux are cited to show related tire comprising multiple layer of ply surrounding bead reinforcing rings and reinforcing rubber material.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz F. Jules whose telephone number is (703) 308-8780. The examiner can normally be reached on Monday-Thursday and every other Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Morano can be reached on (703) 308-0230. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frantz F. Jules
Examiner
Art Unit 3617

FRANTZ F. JULES
PATENT EXAMINER


FFJ

February 24, 2004